



Safety Data Sheet dated 27/2/2018, version 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: **Sapphire Grain**

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use:

Rodenticide - Biocidal use

Professional use

Uses advised against:

Do not use for purposes other than those stated in "Recommended uses"

1.3. Details of the supplier of the safety data sheet

Company:

Lodi Group - Parc d'Activités des Quatre Routes

35390 Grand Fougeray - France Tel 0033 (0) 2.99.08.48.59

Competent person responsible for the safety data sheet:

fds@lodi.fr

1.4. Emergency telephone number

NPIS (National Poison Centre) - Birmingham Unit

[To be called by medical staff or physicians]

City Hospital, Birmingham, B18 7QH, UK


Tel: 0844 892 011


SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:

EC regulation criteria 1272/2008 (CLP)

 Danger, Repr. 1B, May damage the unborn child.

 Warning, STOT RE 2, May cause damage to organs through prolonged or repeated exposure.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H360 May damage the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

Safety Data Sheet Sapphire Grain

Precautionary statements:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P262 Do not get in eyes, on skin, or on clothing.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER.
- P402+P404 Store in a dry place. Store in a closed container.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

EUH401 EUH401: To avoid risks to human health and the environment, comply with the instructions for use. Contains Brodifacoum

Special provisions according to Annex XVII of REACH and subsequent amendments:
None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 2: Hazards identification








SECTION 3: Composition/information on ingredients

3.1. Substances

Not available

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
50 ppm	Brodifacoum	Index number: 607-172-001 CAS: 56073-10-0 EC: 259-980-5	 3.1/1/Dermal Acute Tox. 1 H310  4.1/A1 Aquatic Acute 1 H400 M=10.  4.1/C1 Aquatic Chronic 1 H410 M=10.  3.1/1/Inhal Acute Tox. 1 H330  3.1/1/Oral Acute Tox. 1 H300  3.7/1B Repr. 1B H360  3.9/1 STOT RE 1 H372

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Safety Data Sheet

Sapphire Grain

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash with plenty of water and soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

Remove contaminated clothing, wash skin with soap and rinse thoroughly with water.

Do not use solvents or thinners.

Thoroughly wash with soap and water

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wash thoroughly under a trickle of water (warm if possible) for several minutes, holding the eyelids open under the stream of water.

Seek medical attention if ill effect or irritation develops

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

Immediately consult a physician and show the label.

Do not induce vomiting.

Rinse mouth

Do not give anything by mouth.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

In case of inhalation, breath fresh air and have a rest. In case of faintness, consult a physician and show the label.

4.2. Most important symptoms and effects, both acute and delayed

This product contains an anticoagulant substance. If ingested, symptoms, which may be delayed, may include nosebleed and bleeding gums. In severe cases, there may be bruising and blood present in the faeces or urine.

4.3. Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

Antidote: Vitamin K1 administered by medical/veterinary personnel only.

In case of accidental poisoning by a domestic animal, go to the vet and show the label.

The product contains an anticoagulant rodenticide, a treatment with Vitamine K1 could be necessary during a long time.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Safety Data Sheet

Sapphire Grain

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Rapidly recover the product. To do so, wear a mask and protective clothing.

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Exercise the greatest care when handling or opening the container.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container, tightly closed

Keep in a dry and cool place.

Keep away from food and drink and animal feeding stuffs

Keep out of reach of children

Store in places prevented from the access of children, birds, pets and farm animals.

Always keep the containers tightly closed.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available
 DNEL Exposure Limit Values
 Not available
 PNEC Exposure Limit Values
 Brodifacoum ATP9 - CAS: 56073-10-0
 Target: Fresh Water - Value: 0.00004 mg/l
 Target: Freshwater sediments - Value: 0.000004 mg/l
 Target: Microorganisms in sewage treatments - Value: 0.0038 mg/l
 Target: 19250.LODI01 - Value: 0.88 mg/kg

8.2. Exposure controls

Eye protection:

Avoid contact with eyes

Protection for skin:

Overall.

Wash clothing regularly

Protection for hands:

Waterproof gloves according to NF EN374

Wearing gloves is mandatory.

Respiratory protection:

Do not breathe dusts

Class FFP1

Thermal Hazards:

None

Environmental exposure controls:

Prevent access to children, pets and non-target animals.

Avoid release in the environment

Avoid release in watercourses and sewers

Place baits in areas not submersible and weatherproof.

Hazardous to wildlife.

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	Blue Grain	--	--
Odour:	Cereals	--	--
Odour threshold:	Not available	--	--
pH:	6.00	19275.05	--
Melting point / freezing point:	Not available	--	--
Initial boiling point and boiling range:	Not available	--	--
Flash point:	Not available	--	--
Evaporation rate:	Not available	--	--
Solid/gas flammability:	Non inflammable	Regulation (EC) No.	--

Safety Data Sheet Sapphire Grain

		440/2008, Annex, A.10 (solid)	
Upper/lower flammability or explosive limits:	Not available	--	--
Vapour pressure:	Not available	--	--
Vapour density:	Not available	--	--
Relative density:	0.398 g/ml - 0.465 g/ml	CIPAC MT 186	--
Solubility in water:	Not available	--	--
Solubility in oil:	Not available	--	--
Partition coefficient (n-octanol/water):	Not available	--	--
Auto-ignition temperature:	Not available	--	--
Decomposition temperature:	Not available	--	--
Viscosity:	Not available	--	--
Explosive properties:	Non explosif	Regulation (EC) No. 440/2008, Annex, A.14	--
Oxidizing properties:	Not available	--	--

9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	Not available	--	--
Fat Solubility:	Not available	--	--
Conductivity:	Not available	--	--
Substance Groups relevant properties	Not available	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

Safety Data Sheet Sapphire Grain

11.1. Information on toxicological effects

Toxicological information of the product:

Not available

Adverse health effects

Reprotoxic category 1

Toxicological information of the main substances found in the product:

Brodifacoum - CAS: 56073-10-0

a) acute toxicity:

Test: LD50 - Route: oral - Species: Mouse : = 0.4 mg/Kg - Source: Assessment report

Test: LD50 - Route: dermal - Species: Rat : = 3.16 mg/Kg - Source: Assessment Report - Notes: Female

Test: LC50 - Route: Inhalation - Species: Rat : = 3.05 mg/m³ - Source: Assessment Report - Notes: Female

b) skin corrosion/irritation:

Test: Skin Irritant - Route: dermal - Species: Rabbit : 18204.LODI034 - Source: Assessment Report

c) serious eye damage/irritation:

Test: Eye Irritant - Route: ocular - Species: Rabbit : 18204.LODI034 - Source: Assessment Report - Notes: Reversible

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Route: dermal sensitizing - Source: Assessment Report - Notes: Maximisation test of Ritz and Buehler

g) reproductive toxicity:

Test: NOAEL - Route: oral - Species: Rat : = 0.001 mg/kg b.w/d - Source: Assessment Report - Notes: Maternal toxicity

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Brodifacoum - CAS: 56073-10-0

a) Aquatic acute toxicity:

Endpoint: EC50 Daphnia magna = 0.25 mg/L - Duration h: 48

Endpoint: LC50 Rainbow Trout = 0.04 mg/L - Duration h: 96

Endpoint: ErC50 Algae = 0.04 mg/L - Duration h: 72

12.2. Persistence and degradability

Brodifacoum - CAS: 56073-10-0

Safety Data Sheet Sapphire Grain

Biodegradability: Non-readily biodegradable - Test: Not available - Duration: Not available - %: Not available - Notes: Not available

12.3. Bioaccumulative potential

Brodifacoum ATP9 - CAS: 56073-10-0

Bioaccumulation: Calculated bioaccumulation - Test: BCF - Bioconcentration factor 35134 - Duration: Not available - Notes: Fish - Calculated according to TGD eq. 75, using log Kow = 6.12

Bioaccumulation: Calculated bioaccumulation - Test: BCF - Bioconcentration factor 15820 - Duration: Not available - Notes: Earthworm - calculated according to TGD eq. 82d, using log Kow = 6.12

12.4. Mobility in soil

Brodifacoum - CAS: 56073-10-0

Mobility in soil: Not mobile - Test: Leaching column Not available - Duration: Not available - Notes: Not available

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

Not available

14.3. Transport hazard class(es)

Not available

14.4. Packing group

Not available

14.5. Environmental hazards

Marine pollutant: No
Not available

14.6. Special precautions for user

Not available

Safety Data Sheet Sapphire Grain

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not available

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Dir. 98/24/EC (Risks related to chemical agents at work)
 Dir. 2000/39/EC (Occupational exposure limit values)
 Regulation (EC) n. 1907/2006 (REACH)
 Regulation (EC) n. 1272/2008 (CLP)
 Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
 Regulation (EU) 2015/830
 Regulation (EU) n. 286/2011 (ATP 2 CLP)
 Regulation (EU) n. 618/2012 (ATP 3 CLP)
 Regulation (EU) n. 487/2013 (ATP 4 CLP)
 Regulation (EU) n. 944/2013 (ATP 5 CLP)
 Regulation (EU) n. 605/2014 (ATP 6 CLP)
 Regulation (EU) n. 2015/1221 (ATP 7 CLP)
 Regulation (EU) n. 2016/918 (ATP 8 CLP)
 Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Restrictions related to the product or the substances contained according to Annex XVII
 Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

No restriction.

Restrictions related to the substances contained:

Restriction 30

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)
 Regulation (EC) nr 648/2004 (detergents).
 Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1
 None

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H310 Fatal in contact with skin.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H330 Fatal if inhaled.
 H300 Fatal if swallowed.
 H360 May damage fertility or the unborn child if inhaled and in contact with skin.
 H372 Causes damage to organs (blood) through prolonged or repeated exposure.

Hazard class and hazard category	Code	Description

Safety Data Sheet Sapphire Grain

Acute Tox. 1	3.1/1/Dermal	Acute toxicity (dermal), Category 1
Acute Tox. 1	3.1/1/Inhal	Acute toxicity (inhalation), Category 1
Acute Tox. 1	3.1/1/Oral	Acute toxicity (oral), Category 1
Repr. 1B	3.7/1B	Reproductive toxicity, Category 1B
STOT RE 1	3.9/1	Specific target organ toxicity - repeated exposure, Category 1
STOT RE 2	3.9/2	Specific target organ toxicity - repeated exposure, Category 2
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Repr. 1B, H360	Calculation method
STOT RE 2, H373	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
CSR:	Chemical safety report
DNEL:	Derived No Effect Level.
EC50:	
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.

Safety Data Sheet Sapphire Grain

N.A.:	Not available
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
UN:	United Nations
WGK:	German Water Hazard Class.